



Indoor Air Quality Tools for Schools

Indoor Air Quality (IAQ)

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NEWS AND EVENTS

- **Participate in National Healthy Schools Day.** Join us in celebrating the 11th annual National Healthy Schools Day on April 30, 2013! Show your commitment to healthy school environments for all children: become a Healthy Schools Day partner, host an activity or event in your area, and join in spreading the word. To learn more, check out <http://www.nationalhealthyschoolsday.org/>
- **Live Streaming of the Green Ribbon Schools (GRS) Winners.** Watch the announcement by U.S. Department of Education on April 22, at 10 a.m. ET on <http://www.ustream.tv/channel/education-department>

RESOURCES

- **Visit American Association of School Administrators' (AASA) New Site!** The site titled “IAQ in Practice” features testimonials from superintendents and district leaders on how they have used IAQ to improve their schools and districts. <http://iaqinpractice.org/home/>
- **In Case You Missed It!** Check out resources from the 3rd Annual Green Schools National Conference, that was held in West Palm Beach, Fla., February 22-24, 2013, here: <http://www.greenschoolsnationalconference.org/>
- **Download National Academy of Science's Report: Attributes for Healthy Learning.** Learn more about the accumulating evidence that shows that the quality of indoor environments can affect the health and productivity of adults and children. http://books.nap.edu/catalog.php?record_id=11756

Did You Know ...

You can expect increased academic performance and health in your school when you make improvements to your maintenance and repair programs? Check out the *IAQ Tools for Schools* [Frequently Asked Questions](#) page to find out more.

How You Can Stay Connected to the *IAQ Tools for Schools* Network:

- Share successful IAQ management strategies on the Email Discussion List. Join today by sending a blank email message to schools_iaq_connector_subscribe@lists.epa.gov. Then check your email inbox for confirmation and membership details.
- Access EPA's online [IAQ Resources for Schools](#). Find factsheets, guidance and other interactive tools to help create healthy learning environments in schools.
- Check out the [Calendar of Events](#) regularly to discover what other school leaders across the country are doing to improve IAQ.

- **Read USGBC's Report: State of our Schools.** Read this report to learn about the need to modernize U.S. elementary and secondary schools to meet health, safety and educational standards. <http://www.centerforgreenschools.org/stateofschools>
- **The Healthy Schools Report**, released by the Healthy Schools Network, this report features state-by-state data on health risks present in our nation's schools. <http://www.healthyschools.org/HealthySchools2015.pdf>

Access Previous Connector E-Newsletters Online

Can't find a previous *IAQ Tools for Schools* Connector e-newsletter in your inbox? No problem! Visit the [e-newsletter archive](#) on the *IAQ Tools for Schools* website to access printable versions (PDFs) of all past editions.

To learn more about upcoming events for school stakeholders, visit our [Calendar of Events](#) site to determine if there is an event near you.

THE CONNECTION BETWEEN IAQ AND STUDENT PERFORMANCE

Scientific research continually provides evidence that indoor environments can have a [major impact on academic performance](#). Dampness and mold; problems with heating, ventilation and air conditioning (HVAC) systems; insufficient cleaning or excessive use of cleaning chemicals; chemical emissions from products and materials; the presence of pesticides and allergens; and other maintenance issues can trigger a host of health problems, including asthma, allergies, other respiratory diseases, infectious outbreaks, lethargy and discomfort. These health problems can increase absenteeism and reduce academic performance. Improvements in school environmental quality can enhance student performance, as well as teacher and staff productivity and retention.

IAQ problems can cause increased absences due to respiratory infections, allergic diseases from biological contaminants, or adverse reactions to [chemicals](#) used in schools. Building factors or pollutants most frequently associated with respiratory health effects include:

- [Moisture](#), water damage and microbiological pollutants.
- [Animal](#) and other biological allergens.
- Combustion byproducts such as [nitrogen dioxide](#).
- Moisture or dirt in [HVAC systems](#).
- [Low ventilation rates](#).
- [Formaldehyde](#).
- Chemicals in [cleaning products](#).
- Outdoor pollutants or [vehicle exhaust](#).

The Evidence

[Scientific evidence](#) has long demonstrated an association between poor IAQ and respiratory health effects, including [asthma](#). Maintenance issues in schools, such as insufficient cleaning or excessive use of cleaning chemicals, have been shown to trigger asthma and allergies. According to the Centers for Disease Control and Prevention (CDC), asthma is one of the leading causes of school absenteeism. Multiple studies have found that children's overall performance decreases with illnesses or absences from school.

Did you know that...?

- Health, attendance and academic performance can improve with increased maintenance.
 - Schools with better physical conditions show improved academic performance, while schools with fewer janitorial staff and higher maintenance backlogs show poorer academic performance.
 - Breathing dirty air may lower kid's IQ (intelligence quotient).
 - Increasing ventilation rates can improve student performance and allow fresh air to be circulated throughout the classroom.
 - Teachers are the most important determinant of students' academic success and high teacher absentee rates can affect student performance.
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TAKE ACTION! STEPS YOU CAN TAKE TO IMPROVE ACADEMIC ACHIEVEMENT

School districts can integrate no-cost and low-cost activities that safeguard the school environment and achieve significant health and performance improvements. School districts with proactive facility maintenance programs have demonstrated a strong business case for coordinating activities to improve the physical environment, as well as student health, in an integrated program focused on improved academic achievement.

- 1. Establish an IAQ Management Program.** Poor IAQ often results from neglect. Take a proactive stance to managing potential IAQ hazards by demanding regular and proper maintenance of indoor environments and HVAC systems. Programs can focus on the maintenance of existing school facilities and to new school construction. These resources can help you get started:
 - *IAQ Tools for Schools* [Action Kit](#).
 - [Key Drivers](#) and [Technical Solutions](#).
 - EPA's [slideshow](#) on IAQ and student performance.
- 2. Control Air Ventilation.** Most schools' ventilation rates are below recommended levels. However, ensuring adequate air ventilation rates in all classrooms can:
 - Reduce absences and the transmission of infectious diseases.
 - Improve the overall health and productivity of teachers.
 - Improve test scores and student performance in completing mental tasks.
 - In addition, ensuring that heating, ventilation and air conditioning (HVAC) drain pans and other components are clean reduces the chance of occupant illnesses.
- 3. Control Mold and Moisture to Reduce Asthma Symptoms.** Dampness and mold in homes, offices and schools cause a significant increase in several respiratory and asthma – related health outcomes. Asthma is a leading cause of absenteeism in schools, which hinders classroom achievement.
- 4. Coordinate or Integrate Health, Environmental and Maintenance Programs into a Unified Effort.** Highly coordinated and integrated programs can save resources and improve results from all programs, and can be a key driver of improved academic performance.

GET ANSWERS TO YOUR QUESTIONS

Is there a topic you want to see covered in an *IAQ Tools for Schools* Connector e-newsletter? Do you have suggestions for a webinar or e-newsletter feature, or do you have questions about a specific IAQ topic? If so, send us an email at IAQTfSConnector@cadmusgroup.com.

Share YOUR news and events! Send us information to share with the school IAQ community. It could be featured in the next Connector e-newsletter. Email your news and events to IAQTfSConnector@cadmusgroup.com.

The *IAQ Tools for Schools* guidance is a comprehensive resource designed to help schools maintain a healthy environment in school buildings by identifying, correcting and preventing IAQ problems. Learn more about the *IAQ Tools for Schools* guidance at <http://www.epa.gov/iaq/schools>.